

**DEPARTMENT OF ENVIRONMENTAL QUALITY
WATER PROTECTION BUREAU
Metcalf Building, Helena, Montana 59620
(406) 444-3080**

ENVIRONMENTAL ASSESSMENT (EA)

Division/Bureau: Permitting & Compliance Division, MGWPCS Permits;

Project or Application: Lang Creek Brewery, Inc.; MTX000088

Description of Project: The permit renewal authorizes the discharge of treated industrial wastewater from Lang Creek Brewery (LCB) located approximately 25 miles west of Marion. LCB is a micro-brewery specializing in the production of English style ales produced primarily from English style malts and an abundance of hops. This industrial wastewater does not include sewage. Solid wastes from the beer-making process are collected to be used as feed for local livestock. The liquid portion of the wastewater receives primary treatment in an aeration-settling tank sequence prior to entering the dose tank. The effluent is siphon-dosed to a subsurface drainfield in the winter months and land applied by flood irrigation in the summer. Effluent is discharged at an estimated average daily flow rate of 685 gallons per day (gpd). During this permit renewal cycle, a continuous totalizing flow meter(s) is required to more accurately determine the actual effluent discharge flow rate prior to discharging to the drainfield or the land application site. LCB is located in the SE/4, SW/4 of Section 18, Township 26 North, Range 26 West in Flathead County. Outfall 001 (land application site) is located approximately at 48° 0' 16.9" North latitude and -115° 0' 9.2" West longitude. Outfall 002 (subsurface drainfield) is located approximately at 48° 0' 17.5" North latitude and -115° 0' 6.5" West longitude. Effluent discharged to the two outfalls on a seasonal basis comes from a (one) common dose tank where the required effluent sampling will be conducted on a quarterly frequency. The discharge is to "Class I" ground water according to the Montana Ground Water Quality Standards, Beneficial Use Classifications. No ground water mixing zone was requested by the permittee.

Benefits and Purpose of Proposal:

Adequate treatment of industrial wastewater before discharging to the subsurface.

Description and analysis of reasonable alternatives whenever alternatives are reasonably available and prudent to consider:

None

Listing and appropriate evaluation of mitigation, stipulations and other controls enforceable by this or another government agency:

See Statement of Basis.

Affected Environment and Effects from the Proposed Project:

<u>Key to Rank</u>	
NA	<i>Not applicable</i>
N	<i>No effects</i>
B	<i>Potentially beneficial effects</i>
A	<i>Potentially adverse effects</i>
M	<i>Corrective action required</i>
P	<i>Additional permits will be required</i>

Rank	Consideration	Remarks
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PHYSICAL AND BIOLOGICAL ENVIRONMENT		
N	1. SOIL SUITABILITY, TOPOGRAPHIC AND/OR GEOLOGIC CONSTRAINTS (soil moisture, unstable soils or geologic conditions, steep slopes, erosion potential, subsidence potential, seismic activity)	Discharge will increase moisture in the unsaturated zone. No known low permeability layers exist between the drainfield and the shallow ground water. The ground surface in the drainfield area is relatively flat (0.0076 ft/ft) on the topographic bench where the outfalls are located, but then slopes rapidly to the east toward the flats of the river floodplain. The area is located in the seismically active mountainous, western one-third of the state.
N	2. HAZARDOUS FACILITIES (power lines, hazardous waste sites, distances from explosive and flammable hazards including chemical/petroleum storage tanks, underground fuel storage tanks and related facilities such as natural gas storage facilities and propane tanks)	This is a permit renewal for an existing facility. There is no new or increased source.
N	3. AIR QUALITY (effects to or from project, dust, odors, emissions)	No significant impacts have been determined.
N	4. GROUNDWATER RESOURCES & AQUIFERS (quality/nondegradation, quantity/reliability, distribution, uses/rights, number of aquifers, mixing zones)	No significant degradation of ground water or surface water. The shallow ground water quality has been monitored downgradient from the discharge areas (see Statement of Basis for details).
N	5. SURFACE WATER RESOURCES (quality/nondegradation, quantity/reliability, distribution, uses/rights, storm water controls, source of community supply, community treatment, mixing zones)	The nearest downgradient surface water from Outfall 001 and 002 is the Thompson River, which is approximately 528 feet from the discharge areas. Impacts to surface water were determined non-significant degradation (see current Statement of Basis, as well as the original permit for details).
N	6. VEGETATION AND WILDLIFE SPECIES AND HABITATS, INCLUDING FISHERIES AND AQUATIC RESOURCES (threatened, endangered, sensitive species, prime habitat, population stability, potential for human wildlife conflicts, effectiveness of post-disturbance plans)	There shall be no evidence of plant damage within or immediately bordering the land application site. This was a condition in the original permit and shall be included in the permit renewal.
N	7. UNIQUE, ENDANGERED, FRAGILE, OR LIMITED ENVIRONMENTAL RESOURCES (biologic, topographic, wetlands (within one mile), floodplains (within one mile), scenic rivers, natural resource areas, etc.)	The permit renewal requires at a minimum, a 300-foot buffer zone from the hydraulically downgradient boundary of the land application site to the Thompson River. This was a condition in the original permit and shall be included in the permit renewal.
N	8. LAND USE (waste disposal, agricultural lands [grazing, cropland, forest lands, prime farmland], recreational lands [waterways, parks, playgrounds, open space, federal lands], access, commercial and industrial facilities [production & activity, growth or decline], growth, land-use change, development activity)	This facility was proposed and received a MGWPCS discharge permit on April 1, 1994. Permit modifications were done on May 2, 1994 and August 7, 1995, to include additional sampling requirements. On June 11, 1996, the brewery expanded from the estimated discharge flow rate of 806 gallons per week to 4,000 gallons per week.
N	9. HISTORICAL, CULTURAL, & ARCHEOLOGICAL (sites, facilities, uniqueness, diversity)	No new construction is associated with this permit renewal.
N	10. AESTHETICS (visual quality, nuisances, odors, noise)	Aeration, settling, and dose tanks are all subsurface and are not visible and will not create aesthetic issues, as well as the drainfield (Outfall 002). Odors shall be controlled at the discharge areas (Outfall 001 and 002).

N	11. DEMANDS ON OR CHANGES IN ENVIRONMENTAL RESOURCES INCLUDING LAND, WATER, AIR, OR ENERGY USE (need for new or upgraded energy sources, potential for recycling, etc.) {See (4), (5), and (8).}	Onsite potable water is provided via supply wells completed in the deeper portion of the shallow aquifer.
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Rank	Consideration	Remarks
IMPACTS ON THE HUMAN POPULATION		
NA	12. CHANGES IN DEMOGRAPHIC CHARACTERISTICS (population quantity, distribution and density, rate of change)	No changes in the facility are associated with this permit renewal.
N	13. GENERAL HOUSING CONDITIONS (quality, quantity and affordability)	
NA	14. POTENTIAL FOR DISPLACEMENT OR RELOCATION OF BUSINESS OR RESIDENTS	
N	15. PUBLIC HEALTH AND SAFETY (medical services and facilities, police, fire protection and hazards [see (2)], emergency medical services [see (8), LAND USE for waste disposal])	
N	16. LOCAL EMPLOYMENT AND INCOME PATTERNS (quantity and distribution of employment, economic impact)	
NA	17. LOCAL AND STATE TAX BASE AND REVENUES	
NA	18. EFFECTS ON SOCIAL STRUCTURES AND MORES (social conventions/standards of social conduct), DEMANDS ON SOCIAL SERVICES (law enforcement, educational facilities [libraries, schools, colleges, universities], welfare, etc.)	
N	19. TRANSPORTATION NETWORK (condition and use of roads, traffic flow conflicts, rail, airport compatibility, etc.)	
N	20. CONSISTENCY WITH LOCAL ORDINANCES, RESOLUTIONS, OR PLANS (conformance with local comprehensive plans, zoning or capital improvement plans)	
NA	21. REGULATORY RESTRICTIONS ON PRIVATE PROPERTY RIGHTS (<i>Are we regulating pursuant to a police power? Does the Agency action restrict the use of the property beyond the minimum necessary to achieve compliance with the Act? What are the costs of such additional restrictions resulting from proposed permit conditions? Are there other, less restrictive ways of achieving the same goal? See your assigned legal counsel for assistance preparing this section. [See the Private Property Assessment Act checklist accompanying this permit for details.]</i>)	

Other groups or governmental agencies contacted or which may have overlapping jurisdiction:
Flathead County Health Department, State Health Department

Public Involvement:
Thirty-day public comment period

Individuals or groups contributing to this EA:
APEC, Inc.

Summary of Issues:
See Statement of Basis

Summary of Potential Effects:
See Statement of Basis

Cumulative Effects:
None

Recommendation:
Issue Ground Water Discharge permit renewal

Recommendation for Further Environmental Analysis:

☐ Prepare an EIS

☐ Prepare a more detailed EA

☒ No further analysis

EA prepared by: Pat Potts

Date: October 3, 2008

Bureau Check-off

AWMB _____
IEMB _____

CSB _____
WPB _____

EMB _____
Other _____

Approved by:

Jenny Chambers, Bureau Chief
Water Protection Bureau
Permitting & Compliance Division

(Print name and title)

(Signature)

(Date)